

**Amendments to the Claims:**

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) Mirror suppression circuit comprising

a first quadrature signal path coupled between quadrature signal input and output terminals and including

an error correction circuit for correction of amplitude and phase errors in a carrier modulated quadrature signal comprising a pair of in-phase and phase quadrature signal components,

~~characterized by wherein~~

a quadrature output of ~~said the~~ error correction circuit ~~being is~~ coupled through a first filter circuit for a selection of ~~said the~~ quadrature signal to a first quadrature input of an error detection circuit,

~~said the~~ first quadrature signal path ~~being is~~ coupled prior to ~~said the~~ first filter circuit through a second quadrature signal path to a second quadrature input of ~~said the~~ error detection circuit,

~~said the~~ error detection circuit ~~detecting detects~~ amplitude and phase errors and ~~providing provides~~ amplitude and phase control signals to amplitude and phase control inputs of ~~said the~~ error correction circuit for a negative feed back of ~~said the~~ amplitude and phase errors to ~~said the~~ error correction circuit,

~~said the~~ amplitude control signal ~~varying varies~~ with at least one of products  $I_w * I_{ref}$  and  $Q_w * Q_{ref}$  and

~~said the~~ phase control signal ~~varying varies~~ with at least one of products  $I_w * Q_{ref}$  and  $Q_w * I_{ref}$ ,

$I_w$  and  $Q_w$ , ~~respectively~~  $I_{ref}$  and  $Q_{ref}$ , representing the in-phase and phase quadrature signal components of ~~said the~~ quadrature signal at the first quadrature input of the error detection circuit, ~~respectively and~~  $I_{ref}$  and  $Q_{ref}$  ~~representing~~ the in-phase and phase quadrature signal components of a quadrature reference signal occurring at the negative carrier frequency of ~~said the~~ quadrature signal at the second quadrature input of the error detection circuit.

2. (Currently amended) Mirror suppression circuit according to claim 1, ~~wherein~~ characterized by

~~said the~~ amplitude control signal ~~varying-varies~~ with  $I_w * I_{ref} + Q_w * Q_{ref}$  and

~~said the~~ phase control signal ~~varying-varies~~ with  $I_w * Q_{ref} - Q_w * I_{ref}$ .

3. (Currently amended) Mirror suppression circuit according to claim 1, ~~wherein or 2,~~ characterized by

the second quadrature signal path ~~including~~ includes

~~an inverter means providing that provides~~ signal inversion in obtaining ~~said the~~ quadrature reference signal.

4. (Currently amended) Mirror suppression circuit according to claim 1, ~~wherein one of~~ claims 1 to 3, characterized by

~~said the~~ second quadrature signal path ~~being~~ is coupled to the first quadrature signal path subsequent to the error correction circuit.

5. (Currently amended) Mirror suppression circuit according to claim 1, ~~wherein one of~~ claims 1 to 4, characterized by

~~said the~~ second quadrature signal path ~~including~~ includes a second filter circuit for a selection of ~~said the~~ quadrature reference signal.

6. (Currently amended) Mirror suppression circuit according to claim 3, ~~wherein one of claims 3 to 5,~~ characterized by

~~said the~~ second quadrature signal path ~~comprising said signal~~ includes the inverter coupled between the first quadrature signal path and ~~said the~~ second filter circuit,

~~said the~~ second filter circuit being substantially identical to ~~said the~~ first filter circuit.

7. (Currently amended) Receiver providing quadrature signal processing comprising

- an RF input stage subsequently followed by a mixer stage for a conversion of an RF signal into an IF signal ~~and,~~
- an IF stage for a selective amplification of ~~said the~~ IF signal, and
- ~~characterized by~~
- a mirror suppression circuit ~~according to one of claims 1 to 5 comprising~~
- a first quadrature signal path coupled between quadrature signal input and output terminals and including
- an error correction circuit for correction of amplitude and phase errors in a carrier modulated quadrature signal comprising a pair of in-phase and phase quadrature signal components,
- wherein
- a quadrature output of the error correction circuit is coupled through a first filter circuit for a selection of the quadrature signal to a first quadrature input of an error detection circuit,
- the first quadrature signal path is coupled prior to the first filter circuit through a second quadrature signal path to a second quadrature input of the error detection circuit,
- the error detection circuit detects amplitude and phase errors and provides amplitude and phase control signals to amplitude and phase control inputs of the error correction circuit for a negative feed back of the amplitude and phase errors to the error correction circuit,
- the amplitude control signal varies with at least one of products  $I_w * I_{ref}$  and  $Q_w * Q_{ref}$ ,
- the phase control signal varies with at least one of products  $I_w * Q_{ref}$  and  $Q_w * I_{ref}$ ,
- $I_w$  and  $Q_w$  representing the in-phase and phase quadrature signal components of the quadrature signal at the first quadrature input of the error detection circuit, and  $I_{ref}$  and  $Q_{ref}$  representing the in-phase and phase quadrature signal components of a quadrature reference signal occurring at the negative carrier frequency of the quadrature signal at the second quadrature input of the error detection circuit,
- ~~having its the~~ quadrature signal input of the mirror suppression circuit is coupled to a quadrature output of the mixer stage, and
- ~~said the~~ first filter circuit ~~being is~~ part of ~~said the~~ IF stage and ~~having has~~ a resonance frequency at the carrier frequency of ~~said the~~ IF signal.

8. (Currently amended) Receiver according to claim 7, wherein comprising  
~~a mirror suppression circuit according to claim 5,~~  
~~characterized by~~  
the second quadrature signal path includes a second filter circuit for a selection of the  
quadrature reference signal, and  
the second filter circuit selecting said selects the quadrature reference signal occurring  
at the negative carrier frequency of said the quadrature IF signal.

9. (Currently amended) Receiver according to claim 8 ~~comprising~~  
~~a mirror suppression circuit according to claim 3,~~  
~~characterized by wherein~~  
the second quadrature signal path includes  
an inverter that provides signal inversion in obtaining the quadrature reference  
signal, and  
~~said the~~ second quadrature signal path comprising comprises  
~~said signal the~~ inverter coupled between the first quadrature signal path and  
~~said the~~ second filter circuit,  
~~said the~~ second filter circuit being identical to said the IF filter circuit.

10. (Currently amended) Receiver according to claim 9, wherein characterized by  
both first and second filter circuits comprising comprise resonance amplifier type  
polyphase filters.

11. (Currently amended) Receiver according to claim 7, wherein one of claims 1 to 10,  
characterized in that  
~~said the~~ error correction circuit includes  
an amplitude correction circuit comprising  
a first multiplier included in at least one of the pair of in-phase and  
quadrature paths of the first quadrature signal path for an amplitude variation of the signal at  
~~said the~~ input with said the amplitude error.

12. (Currently amended) Receiver according to claim 11, wherein ~~characterized by~~

~~said the~~ amplitude correction circuit ~~comprising comprises~~

a differential stage following ~~said the~~ detection circuit ~~converting said that~~  
~~converts the~~ amplitude control signal into a differential pair of first and second amplitude  
 control signals and ~~supplying supplies~~ the ~~same differential pair~~ to ~~said the~~ first and a second  
 multiplier, respectively,

~~said the~~ first and second multipliers ~~being are~~ included in ~~said the~~ in-phase and  
 quadrature paths of the first quadrature signal path.

13. (Currently amended) Receiver according to claim 7, wherein ~~one of claims 1 to 10,~~  
~~characterized in that~~

~~said the~~ error correction circuit includes a phase correction circuit comprising

a third multiplier having

a signal input coupled to one of ~~said the~~ in-phase and quadrature paths  
 of the first quadrature signal path and

a signal output coupled to a first adder device, which is included in the  
 other of ~~said the~~ in-phase and quadrature paths for supplying thereto a part of the signal  
 occurring at ~~said the~~ one path to ~~said the~~ other path varying with ~~said the~~ phase control signal.

14. (Currently amended) Receiver according to claim 13, wherein ~~characterized by~~

~~said the~~ phase correction circuit ~~comprising comprises~~

a differential stage following ~~said the~~ detection circuit ~~converting said that~~  
~~converts the~~ phase error into a differential pair of first and second phase error signals and  
~~supplying the same~~ ~~supplies the differential pair~~ to modulation signal inputs of ~~said the~~ third  
 and a fourth multiplier, respectively, and

~~said the~~ third and fourth multipliers ~~having include:~~

inputs coupled to the phase quadrature and in-phase paths of the first  
 quadrature signal path, and ~~having~~

outputs coupled to ~~said the~~ first and a second adder device, which are included  
 in ~~said the~~ in-phase and phase quadrature paths, respectively.

15. (New) Mirror suppression circuit according to claim 2, wherein  
the second quadrature signal path includes  
an inverter that provides signal inversion in obtaining the quadrature reference signal.
16. (New) Mirror suppression circuit according to claim 15, wherein  
the second quadrature signal path is coupled to the first quadrature signal path subsequent to the error correction circuit.
17. (New) Mirror suppression circuit according to claim 16, wherein  
the second quadrature signal path includes a second filter circuit for a selection of the quadrature reference signal.
18. (New) Mirror suppression circuit according to claim 17, wherein  
the second quadrature signal path includes the inverter coupled between the first quadrature signal path and the second filter circuit,  
the second filter circuit being substantially identical to the first filter circuit.
19. (New) Mirror suppression circuit according to claim 2, wherein  
the second quadrature signal path is coupled to the first quadrature signal path subsequent to the error correction circuit.
20. (New) Mirror suppression circuit according to claim 3, wherein  
the second quadrature signal path is coupled to the first quadrature signal path subsequent to the error correction circuit.